

Welcome to UMAM 201

Uniform Mitigation Assessment Method Training



District staff participating in today's training:



Anita Bain- Environmental Resource Permitting Division Director, West Palm Beach

Laura Layman- Environmental Supervisor, Lower West Coast Service Center

Barb Conmy- Environmental Supervisor, Section Leader, West Palm Beach

Mindy Parrott, Environmental Supervisor, Martin-St. Lucie Service Center

Marc Ady, Environmental Supervisor, Orlando Service Center

District staff participating in today's training (cont'd):



- Environmental Analyst review staff in Fort Myers:
- Jewelene Harris, Scientist IV
- Julie Arrison, Scientist III
- John Policarpo, Scientist III
- Holly Bauer-Windhorst, Scientist III
- Karyn Allman, Scientist II
- Justin Hojnacki, Scientist I

Goals of today's training exercise:



To provide an opportunity for exchange of knowledge about the UMAM rule and how it is applied

To provide an opportunity for feedback and greater consistency in scoring

To identify other aspects of UMAM needing further discussion

Background Information



- Legislature mandated a method to measure "No Net Loss of Wetland Function"
- UMAM implemented 2/2/04
- Replaces mitigation ratios and WRAP; other rules unchanged
- Effective statewide for FDEP, WMDs and local governments
- Part I establishes Frame of Reference; Part II evaluates functions according to Frame of Reference

Part I- Qualitative Characterization



Ch 62-345.400(1): An assessment area must be described with sufficient detail to provide a <u>frame of reference</u> for the type of community being evaluated and to identify the functions that will be evaluated



Part I- Qualitative Characterization

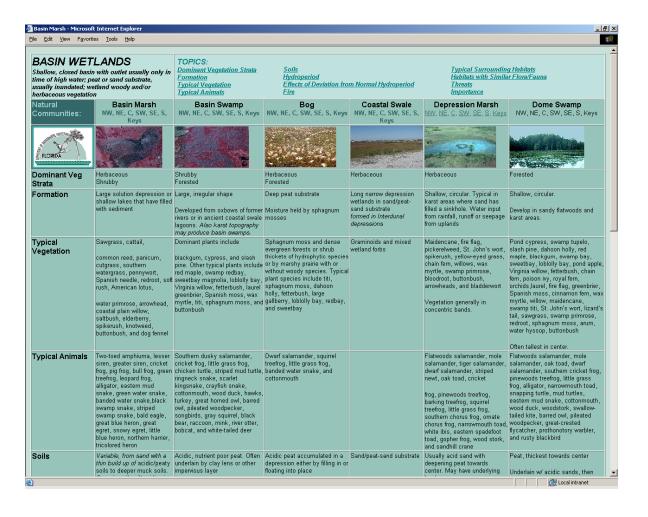
The reference wetland type is identified upfront:



- Melaleuca forest with a wet prairie groundcover?
- Or wet prairie community that has been invaded by Melaleuca?

Reference Wetland Types (Samples)





UMAM Part 1 Form: Setting the Stage



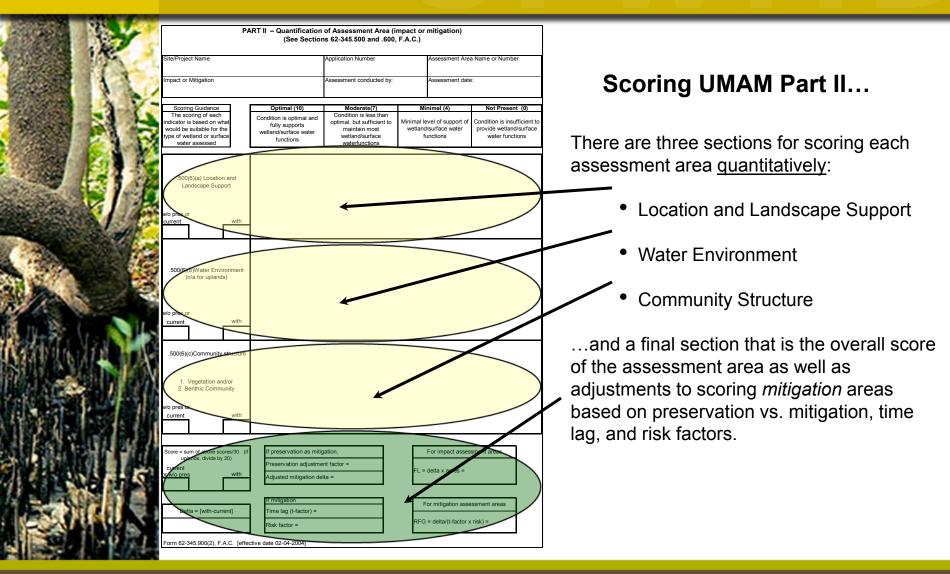
PART I – Qualitative Description (See Section 62-345.400, F.A.C.)				
Site/Project Name	Application Number	er	Assessment Area Name or Number	
FLUCCs code	Further classification (optional)		Impact or Mitigation Site? Assessment Area Size	
Basin/Watershed Name/Number Affect	ted Waterbody (Class)	Special Classificati	ON (i.e.OFW, AP, other local/state/federal designation of impollance)	
Assessment area de can be filled out in the office Significant nearby features Uniqueness (considering the relative rarity in relation to the regional landscape.)				
Functions Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the approximation and reasonable expected to		Mitigation for previous permit/other historic use Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the		
Use Wet	land Field	Guid	es/Literature	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):				
Can be filled out in the field				
Assessment conducted by:		Assessment date	(s):	
Form 62-345.900(1), F.A.C. [effective date 02-04-2004]				

Part 1: continued



- Part I characterization <u>drives</u> Part II evaluation
- Lumping versus splitting assessment areas
- Degraded system: use underlying natural system as frame of reference
- Altered system: use natural system it most closely resembles currently (hydric pasture, for example)

UMAM Part II: Scoring Losses and Gains



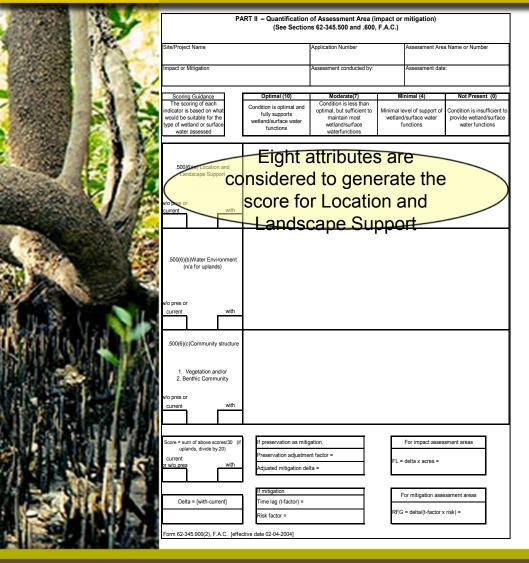
UMAM Part II: Quantitative Assessment



Each impact assessment area and each mitigation assessment area must be evaluated under two conditions:

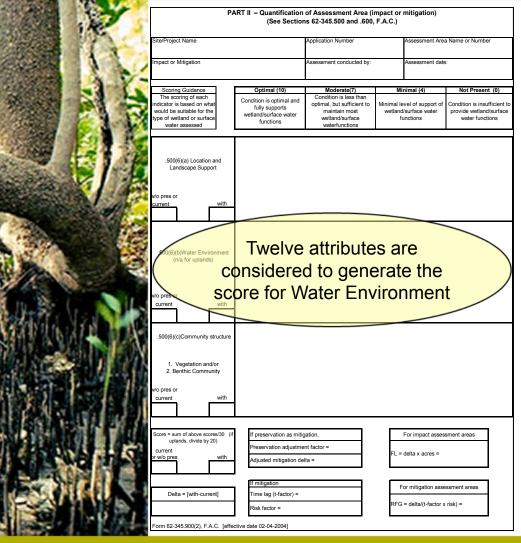
- 1. Current condition (or without preservation in the case of preservation mitigation)
- 2. b) "With impact" or "With mitigation" These assessments are based on the reasonably expected outcomes, which may represent an increase, decrease, or no change in value relative to the current condition.

Part II: Location and Landscape Support



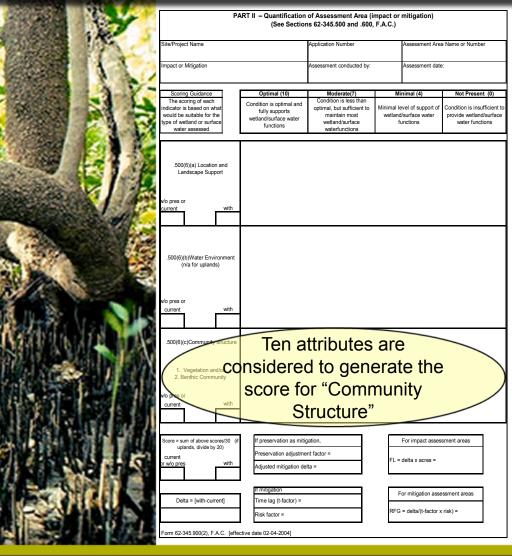
- Support to wildlife by outside habitats
- Invasive exotics or other invasive plant species in proximity of the assessment area
- Wildlife access to and from outside distance and barriers
- Functions that benefit fish and wildlife downstream – distance or barriers
- Impacts of land uses outside assessment area to fish and wildlife
- Benefits to downstream or other hydrologically connected areas
- Benefits to downstream habitats from discharges
- Protection of wetland functions by upland mitigation assessment areas

Part II: Water Environment



- Water levels and flows
- Water level indicators
- Soil moisture
- Soil erosion or deposition
- Evidence of fire history
- Vegetation community zonation
- Vegetation hydrologic stress
- Use by animal species with specific hydrological requirements
- Plant community composition species tolerant of and associated with water quality degradation or flow alteration
- Direct observation of standing water
- Existing water quality data
- Water depth, wave energy, currents and light penetration

Part II: Community Structure



- Plant species in the canopy, shrub, or ground stratum
- Invasive exotics or other invasive plant species
- Regeneration & recruitment
- Age & size distribution
- Density and quality of coarse woody debris, snag, den, and cavity
- Plant condition
- Land management practices
- Topographic features such as refugia ponds, creek channels, flats or hummocks
- Siltation or algal growth in submerged aquatic plant communities
- Upland mitigation area level of habitat and support for fish and wildlife in the associated wetlands or surface waters

Part II: Basic Terms



- Functional Loss (FL)
- Relative Functional Gain (RFG)
- Functional Gain (FG)
- Preservation Adjustment Factor (PAF)
- Time Lag
- Risk

-Today's focus is on scoring; not the mitigation calculations

Preservation



- Raw Score: with without preservation
- Adjusted Mitigation Delta: Preservation Adjustment Factor (PAF), time lag and risk only if appropriate
- Lift generated only considers protection from unregulated impacts
- Preservation versus enhancement

Preservation Lift



- Wetlands: (Preservation/Management)
 - (Degradation/Neglect)
- Uplands: (Supporting Wetland Habitat)
 - (Development up to Buffer)
- Mosaic: (Intact corridors/habitat support) – (Fragmented habitat)
- Specific applicability depends on site and mitigation plan
- Upland preservation versus upland enhancement (not all uplands start with a zero)

Preservation Adjustment Factor



- Management for natural ecological conditions
- Relationship between terrestrial, aquatic, wetland communities
- Scarcity; use by listed species
- Proximity/support to significant ecological preserves
- Development pressure (extent/likelihood of impacts if not protected)
- Not an average of these parameters; some may be weighted more heavily than others

Time Lag



Time: How long between functional loss (impacts) and with-mitigation value?

<u>TABLE 1.</u>

Year	T-factor
< or = 1	1
2	1.03
3	1.07
4	1.10
5	1.14
6 – 10	1.25
11 – 15	1.46
16 – 20	1.68
21 – 25	1.92
26 – 30	2.18
31 – 35	2.45
36 – 40	2.73
41 – 45	3.03
46 – 50	3.34
51 – 55	3.65
>55	3.91

Time Lag



- Different than "mitigation success" or compliance with permit
- Forested: may be significant lag
- Consider type of impact vs. mitigation plan
- Time lag affected by soils, grading, planting plan (size and spacing), exotic removal methods, nutrient cycling, succession, etc.
- Impacts to previous mitigation sites

Risk



- Risk: What is likelihood and severity of potentially not achieving with-mitigation value?
- Uncertainty related to:
 - hydrologic conditions
 - establishing plant communities
 - colonization of exotic/nuisance species
 - water quality
 - potential direct/secondary impacts

Risk



- Common risk score ranges (based on permitting experience to-date):
- Preservation: 1-1.25
- Enhancement: 1.25-1.75
- Restoration: 1.75-2.5
- Creation: 2.0-2.5
- Risk score of 3- "extremely low likelihood of success"

UMAM- Common Items of Discussion



- Discrepancies in Part I
- Time Lag and Risk scores, particularly for enhancement of heavily degraded forested systems
- Lift generated by upland preservation/enhancement
- Variability in location scores
- Viable post-mitigation scores
- Secondary Impacts

The Future



Additional UMAM trainings planned at SFWMD in other service centers

 SFWMD mobilizing to update mitigation success criteria to be more specific to habitat types/reference wetlands

UMAM 201



QUESTIONS?